

We claim:

1. Process for the preparation of 2-phenyl ethanol comprising subjecting a solution of styrene oxide in an organic solvent to catalytic transfer hydrogenation under stirring conditions, over a heterogeneous transition metal catalyst and in the presence of a hydrogen donor, terminating the reaction, separating catalyst and 2-phenyl ethanol.
2. Process according to claim 1 wherein the heterogeneous transition metal catalyst contains a metal from the platinum group selected from the group consisting of s platinum and palladium, along with nickel and a support.
3. Process according to claim 1 wherein concentration of metal in catalyst is in the range of 0.02 – 5.0% (w/w).
4. Process according to claim 1 wherein catalyst to styrene oxide ratio is in the range of 1:100 to 1:4000.
5. Process according to claim 2 wherein the support is selected from the group consisting of clay, silica, alumina and charcoal.
6. Process according to claim 5 wherein the support for the catalyst is a saponite clay of the formula $[\text{Na}^+_{(x)} \{ \text{M}^{2+}_{(6)} \} \{ \text{Si}_{(8-x)} \text{Al}_{(x)} \} \text{O}_{20} (\text{OH})_4]$ wherein M is magnesium or zinc, x is in the range of 0.2 to 2.0.
7. Process according to claim 1 wherein the organic solvent used for preparing the solution of styrene oxide comprises an aliphatic alcohol selected from the group consisting of methanol, ethanol and isopropyl alcohol.
8. Process according to claim 1 wherein hydrogen donor compound is selected from the group consisting of aliphatic alcohol, alkali metal and amine esters of fatty acids.
9. Process according to claim 8 wherein the hydrogen donor compound is selected from sodium acetate, ammonium formate, sodium formate and potassium formate.
10. Process according to claim 9 wherein the hydrogen donor compound is selected from ammonium formate and sodium formate.
11. Process according to claim 1 wherein the conversion of styrene oxide is complete and the selectivity to 2-phenyl ethanol is $\geq 99.9\%$ with high TON.
12. Process according to claim 1 wherein use of molecular hydrogen, diethyl ether, ethylene oxide and AlCl_3 is avoided.
13. Process according to claim 1 wherein the reaction time is in the range of 1 to 12 hours dependent on the concentration of the metal in the catalyst.
14. Process according to claim 1 wherein the reaction is carried out at a temperature in the range of 30-80°C for 1-12 hours.